

**REMARKS**

Applicants acknowledge receipt of the Office Action dated June 25, 2009. In this response, Applicants have amended claims 1, 8, 9, 10, 14, and 15. Following entry of these amendments, claims 1-10 and 12-15 are still pending in the application.

Reconsideration of the present application is respectfully requested in view of the foregoing amendments and the remarks which follow.

**Information Disclosure Statement**

On page 2 of the Office Action, the USPTO has stated that JP 277750 and the NPL document have not been considered. Applications will address these references in a future communication. Applicants also note that several other references they submitted were also “lined through” without explanation.

**Objection of Drawings**

On page 2 of the Office Action, the USPTO has objected the drawings for not including the reference signs mentioned in the description: A, B, C and D. In response, Applicants state that the reference signs (A), (B), (C), and (D) are not elements or features depicted specifically within the drawings. Instead, reference signs (A), (B), (C), and (D) refer generally to parts of the invention as a whole: (A) refers to a DLC coated sliding member (of any type); (B) refers to the other sliding member; (C) refers to the disclosed oxygen-containing compound (C); and (D) refers to the disclosed aliphatic amine compound. Accordingly, Applicants respectfully submit that the drawings be formally accepted.

**Objections Under 37 C.F.R. § 1.75**

On page 3 of the Office Action, the USPTO has objected to claims 14 and 15 for failing to further limit the subject matter of a previous claim. In response, Applicants have amended claims 14 and 15 in this Amendment to positively recite the low-friction agent composition within the body of these claims.

### **Rejections Under 35 U.S.C. § 112**

On page 3 of the Office Action, the USPTO has rejected claims 8 and 9 as being indefinite for not specifying whether the “%” range refers to “mass” or “volume.” In response, Applicants have amended claims 8 and 9 to refer to “mass.” No new matter is being added as the specification as originally filed refers to the amount measured in “mass,” as shown at page 7, lines 9 and 10.

### **Rejections Under § 102**

On page 4 of the Office Action, the USPTO has rejected claims 1-10 and 12-15 as being anticipated by U.S. 6,969,198 to Konishi. In response, Applicants state that this rejection will be addressed by removing the reference as “prior art” after submitting the translations of Japanese priority documents. Applicants will provide these translations in a future correspondence.

### **Rejections Under 35 U.S.C. § 103**

In the Office Action, the USPTO has set forth the following rejections under 35 U.S.C. § 103 which Applicants summarize below:

- a. Page 4, claims 1, 2, 7, 8, 10, and 12-15 over U.S. 6,655,845 to Pope in view of U.S. 5,064,547 to Rubin.
- b. Page 5, claims 1, 2, 9, 10, and 12-15 over Pope in view of U.S. 5,108,633 to Buckley III.
- c. Page 7, claims 3-6 over Pope in view of Rubin and further in view of U.S. 7,067,175 to Veerasamy.
- d. Page 7, claims 3-6 over Pope in view of Buckley and further in view of Veerasamy.

In response to these rejections, Applicants first state that this invention is directed to a low-friction sliding mechanism wherein a low-friction agent composition is interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B). An essential feature of the present invention resides in the combination of diamond-like carbon of the DLC coated sliding member and the low-friction agent composition containing at least one of an oxygen-containing compounds (C) like alcohols, carboxylic acids, esters, ethers,

ketones, aldehydes, carbonates, derivatives thereof, and an aliphatic amine compound (D). As a result, the combination can provide excellent and unexpected low friction characteristics (excessively low friction coefficients), characteristics which cannot be realized under a conventional lubrication theory. The excessively low friction coefficient obtained by the combination is, for example, at a high level of 0.029 or 0.037 as compared with a conventional low level of 0.132 or 0.148.

Concerning the cited references: (a) Pope discloses a bearing having roller and race whose surface is coated with polycrystalline diamond; (b) Rubin discloses a lubricant composition containing saturated dicarboxylic acid having 6 to 32 carbon atoms (see claim 1); and (c) Buckley III discloses a lubricating oil composition containing a long chain aliphatic hydrocarbyl amine which has a chain length of at least 50 carbon atoms (see claim 1).

None of the above cited references teaches the combination of diamond-like carbon and a low friction agent composition containing the claimed particular organic compound, and the significant advantages gained thereby (as discussed in the specification as originally filed).

Also, there is no showing how a person skilled in the art would have been motivated to combine these three references together, anyway. There is also no showing that it would have been expected that the combined use of these three references would have provided the unexpected and surprising friction reducing effects discovered by Applicants.

### **Double Patenting Rejection**

On page 8 of the Office Action, the PTO has rejected claims 1-10 and 12-15 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 10 and 11 of U.S. 6,969,198.

Applicants overcome this rejection by submitting a Terminal Disclaimer, as well as a "Statement Required to Invoke Prior Art Disqualification Under the CREATE Act."

**CONCLUSION**

In view of the foregoing amendments and remarks, Applicants respectfully submit that all of the pending claims are now in condition for allowance. An early notice to this effect is earnestly solicited. If there are any questions regarding the application, the Examiner is invited to contact the undersigned at the number below.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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